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| ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/717,145 | O'BRIEN, STEPHEN |
| | Examiner | Art Unit | |
| | James J. Debrow | 2176 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>11 May 2006</u>.

2a)☒ This action is **FINAL.**    2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-6,8,9,11-17 and 22-28* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6, 8, 9, 11-17, and 22-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

## DETAILED ACTION

1.      This action is responsive to communications: Application filed on 11 May 2006.

2.      Claims 1-6, 8, 9, 11-17, and 22-28 are pending in the case. Claims 1, 11, 23, and

26 are independent claims.


### *Applicant's Response*


3.      In Applicant's response dated 11 May 2006, Applicant amended Claims 1-6, 8, 9,

and 11-17; canceled claims 7, 10 and 18-21; added new claim 22-28; argued against all

objections and rejection previously set forth in previous Office Action.

### *Claim Rejections - 35 USC § 101*

4.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1-28** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

## Claims 1-28

The language of the claims raise a question as to whether the claims are directed merely to an abstract idea that would not result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

## Claims 1-6, and 22:

**Independent Claim 1** recites an iterative method of laying out element in a defined space. As currently cited, Claim 1 is directed to an abstract idea that does not produce a concrete, useful, and tangible result, in that the method merely *manipulates data*.

Stated differently, the method does nothing with the processed data that produces a concrete, useful and tangible result, such as displaying the elements, which are laid out within the defined space.

**Dependent Claims 2-6, and 22** merely recite further manipulation or specification of data. Thus, none of Claims 2-6, and 22 produce a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

**Claims 11-17:**

**Independent Claim 11** recites a processing system of laying out element in a defined space. The "processing system" is comprised solely of computer software. Thus, the recited invention is computer software *per se*.

A computer program is merely a set of instruction capable of being executed by a computer. The computer program itself is not a statutory process in that is does not include the computer-readable medium needed to realize the functionality of the computer program. Thus, as currently recited, Claim 11 is directed to an abstract idea that does not produce a concrete, useful and tangible result, in that the method merely *manipulates data*.

Stated differently, the method does nothing with the processed data that produces a concrete, useful and tangible result, such as displaying the data.

**Dependent Claims 12-17** merely recite further manipulation or specification of data. Thus, none of Claims 12-17 produce a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

**Claims 7, 8, and 23-25:**

**Independent Claim 23** recites a method of laying out one or more elements in a defined space. As currently cited, Claim 23 is directed to an abstract idea that does not produce a concrete, useful, and tangible result, in that the method merely *manipulates data*.

Stated differently, the method does nothing with the processed data that produces a concrete, useful and tangible result, such as displaying the elements, which are laid out within the defined space.

**Dependent Claims 7, 8, 24 and 25** merely recite further manipulation or specification of data. Thus, none of Claims 7, 8, 24 and 25 produce a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

**Claims 26-28:**

**Independent Claim 26** recites a processing system of laying out one or more elements in a defined space. The "processing system" is comprised solely of computer software. Thus, the recited invention is computer software *per se*.

A computer program is merely a set of instruction capable of being executed by a computer. The computer program itself is not a statutory process in that is does not include the computer-readable medium needed to realize the functionality of the computer program. Thus, as currently recited, Claim 26 is directed to an abstract idea that does not produce a concrete, useful and tangible result, in that the method merely *manipulates data*.

Stated differently, the method does nothing with the processed data that produces a concrete, useful and tangible result, such as displaying the data.

**Dependent Claims 27-28** merely recite further manipulation or specification of data. Thus, none of Claims 27-28 produce a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

*Claim Rejections - 35 USC § 112*

5.     The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.     **Claims 1 and 11** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant remarks (on page 11 of Remarks) that support for the amendment may be found at, paragraph 115, 139, and 147 of Applicant's specification. The Examiner was unable to find any support in the original specifications for the amendment arranging geometrically and *"according to the priorities"* the alphanumeric and/or graphical elements included in the content data.

7.     The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. `

Claims **1 and 11** are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 1 and 11 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed 4/13/2006. In that paper, applicant has stated *"support for the amendment may be found at, paragraph 115, 139, and 147 of*

Applicant's specification", and this statement indicates that the invention is different from

what is defined in the claim(s) because there is no support in those cited paragraphs for

adjusting portions in the document.

### Claim Rejections - 35 USC § 103

8.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1-6, 8, 9, 11-17 and 22-28

9.      Claims ~~1-24~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over

**Fukui et al. (Patent No.: 5,517,621; date of Patent: May 14, 1996) (hereinafter**

**'Fukui') in view of Simon et al. (Pub No.: US 2002/0040375 A; Filing Date Apr. 3,**

**2001) (hereinafter 'Simon').**      WDH
                                        7/23/06

.      **In regards to independent claim 1,** Fukui et al. discloses *an iterative method of*

*laying out elements in a defined space, using content data and design data, said*

*content data including alphanumeric and/or graphical elements, and said design data*

*including a rule or rules associated with a particular alphanumeric element or graphical*

*element, said rule defining a scoring system which defines a score dependent on*

*a degree of conformance to said rule, the element being associated with priorities*

*representing a preferred ordering of the elements, the method comprising, in a*

*processing system, the steps of:* (Fukui discloses a document formatting system. In

one embodiment of the invention, the system comprises means for inputting document

data representing the document, including figure data (content data), and region data

indicating a layout region (defined space) to which the document is to be laid out;

means for generating and selecting candidate/element layouts for each figure element;

and means for formatting the document in the layout region according to the selected

candidate/element layouts (design data) (column 1, lines 53-63). Through an Operator

Selection Input Unit the operator is allowed to select a desired candidate/element layout

(column 4, lines 44-58; 15 in Fig 1). Fukui further discloses a Candidate Layout

Generation Module for generating candidates/elements for a layout of the document

data (column 3, lines 44-45; 7 in Fig 1). The document date includes text data

representing sentences of the document and figure data representing drawings and

tables of the document (alphanumeric and/or graphical elements) (column 3, lines 66-

67). The Candidate Layout Generation Module further consist of a Layout Position

Candidate Generation Unit, which generates the candidates/elements positions for

laying out the drawings and tables given by the figure data (arranging geometrically the

alphanumeric and/or graphical elements included in the content data) (column 4, lines

21-23; 9 in Fig 1). Within the Candidate Layout Generation Module, Fukui uses a

Layout Result Estimation Unit to estimate the overall layout resulting from each

candidate/element position by using the coordinates of the layout positions and margin

sizes determined from the candidate/element positions (column 7, lines 3-6; 10 in Fig

1). The results of the Layout Result Estimation Unit is evaluated by a Layout Status

Evaluation Unit according to the prescribed evaluation rules, and stored *(storing said*

*score)* in a table as being satisfactory or unsatisfactory (column 7, lines 56-58; column

8, lines 49-53; 11 in Fig 1; Fig 19):

*(a) arranging geometrically and according to the priorities the alphanumeric*

*and/or graphical elements included in the content data, the arrangement being*

*performed within the defined space in accordance with the preferred ordering so as to*

*obtain a resulting layout* (column 4, lines 21-23; 9 in Fig 1; Fukui discloses a Candidate

Layout Generation Module further consist of a Layout Position Candidate Generation

Unit, which generates the candidates/*elements* positions for laying out the drawings

and tables given by the figure data. Within the Candidate Layout Generation Module,

Fukui uses a Layout Result Estimation Unit to estimate the overall layout resulting from

each candidate/*element* position by using the coordinates of the layout positions and

margin sizes determined from the candidate/*element* positions (column 7, lines 3-6; 10

in Fig 1); column 1, lines 53-63; Fukui further discloses means for inputting document

data representing the document, including figure data, and region data indicating a

layout region to which the document is to be laid out; means for generating and

selecting candidate/element layouts for each figure element; and means for formatting

the document in the layout region according to the selected candidate/element layouts

*(design data))*;

*(c) storing said score* (column 7, lines 56-58; column 8, lines 49-53; 11 in Fig 1;

Fig 19; Fukui discloses the results of the Layout Result Estimation Unit is evaluated by

a Layout Status Evaluation Unit according to the prescribed evaluation rules, and

stored in a table as being satisfactory or unsatisfactory.);

Fukui et al. does not discloses expressly *arranging geometrically and according*

*to the priorities the alphanumeric and/or graphical elements included in the content*

*data,*

(b) *scoring the resulting layout according to the rule or rules included in the*

*design data*;

(d)    repeating the above steps (a) to (c) to determine a number of different

*resulting layouts to be selected in accordance with the score.*

However, Simon teaches *arranging geometrically and according to the priorities*

*the alphanumeric and/or graphical elements included in the content data* (0020; Simon

teaches a method for organizing a plurality of images in a predetermined page format.

Using the broadest interpretation of this meaning, the Examiner concludes that the

"predetermined page format" was developed based on specific priorities as how the

elements are to be arranged.).

(b) *scoring the resulting layout according to the rule or rules included in the*

*design data* (0061, lines 5-6; 210 in Fig 7; Simon teaches a system that uses a

"*scoring*" system when evaluating different page layouts. When evaluating a new layout

with a prior layout, if the new layout has a greater *score* than the prior layout, the new

layout is accepted.);

(d)     repeating the above steps (a) to (c) to determine a number of different

resulting layouts to be selected in accordance with the score (0061, lines 5-6; lines 10-

14; 250 in Fig 7; 210 in Fig 7; Simon teaches a system that uses a "scoring" system

when evaluating different page layouts. When evaluating a new layout with a prior

layout, if the new layout has a greater score than the prior layout, the new layout is

accepted. This optimization is iterated until the last iteration is obtained. At the time of

the invention, using to Simons' teaching it would have been obvious to a person of

ordinary skill in the art that each iteration would produce a different layout, thus

determining a number of different resulting layout.).

Therefore, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of

selecting an optimal page layout to minimize cost (Simon, 0060, lines 1-2), to obtain the

invention as specified in the claim(s).


**In regards to dependent claim 2,** Fukui does not disclose expressly a method

according to claim 1, wherein the defined space is a page of a book.

However, Simon et al. disclose the term page is meant to include an album or

scrapbook page, soft copy display, or other format where images are displayed (section

0046).

Therefore, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of

displaying the different alphanumeric and/or graphical elements from the plurality of

iterative layouts in a book format, to obtain the invention as specified in the claim(s).


**In regards to dependent claim 3,** Fukui *discloses a method according to claim*

*1, wherein the defined space is to be displayed on a screen* (column 4, lines 40-43; 6 in

Fig 1; Fukui discloses the layouts are to be displayed on a display unit.).


**In regards to dependent claim 4,** Fukui discloses a Candidate Order

Determination Unit, which determines the order of preference of the candidate/element

layouts according to the evaluation obtained by the Layout Status Evaluation Unit. The

preference is assigned according to rules for the Candidate Order Determination Unit

(column 4, lines 34-37; 13 in Fig 1; Fig 20;).

Fukui does not discloses expressly *a method according to claim 1, further*

*including a step (e) of selecting one of the resulting layouts in accordance with the score*

*based on the score.*

However, Simon teaches *a method according to claim 1, further including a step*

*(e) of selecting one of the resulting layouts in accordance with the score based on the*

*score* (0061, lines 5-6; lines 10-14; 250 in Fig 7; 210 in Fig 7; 0069, lines 8-11; Simon

teaches a system that uses a *"scoring"* system when evaluating different page layouts.

When evaluating a new layout with a prior layout, if the new layout has a greater *score*

than the prior layout, the new layout is accepted.  This optimization is iterated until the

last iteration is obtained. The system can automatically iterate through the page layout

subroutine generating a predefined number of image page layouts. The page layout that has the highest score is then chosen as the preferred page layout.).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of selecting an optimal page layout to minimize cost (Simon, 0060, lines 1-2), to obtain the invention as specified in the claim(s).


**In regards to dependent claim 5,** Fukui does not discloses expressly *a method according to claim 4, further including a step (f) of repeating said steps (a) through (e) for a plurality of different spaces and different elements, thereby obtaining a plurality of selected resulting layouts which define a finished work.*

However, Simon teaches *a method according to claim 4, further including a step (f) of repeating said steps (a) through (e) for a plurality of different spaces and different elements, thereby obtaining a plurality of selected resulting layouts which define a finished work* (0061, lines 5-6; lines 10-14; 250 in Fig 7; 210 in Fig 7; Simon teaches a method that uses a "scoring" system when evaluating different page layouts. When evaluating a new layout with a prior layout, if the new layout has a greater score than the prior layout, the new layout is accepted. This optimization is iterated until the last iteration is obtained. The system can automatically iterate through the page layout subroutine generating a predefined number of image page layouts. The page layout that has the highest score is then chosen as the preferred page layout.).

Therefore, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of

selecting an optimal page layout to minimize cost (Simon 0060, lines 1-2), to obtain the

invention as specified in the claim(s).


**In regards to dependent claim 6,** Fukui discloses a Candidate Order

Determination Unit, which determines the order of preference of the candidate/element

layouts according to the evaluation obtained by the Layout Status Evaluation Unit

(column 4, lines 34-37; 13 in Fig 1). The preference is assigned according to rules for

the Candidate Order Determination Unit (Fig 20).

Fukui does not expressly disclose *a method according to claim 1, said step (b) of*

*scoring including the step of scoring a high value for an alphanumerical element and/or*

*graphical element that has an optimal relative position in the space, and the step of*

*scoring a low value for an alphanumerical element and/or graphical element that has*

*an poor relative position in the space, the rule or rules determining the optimal and*

*poor position in the space.*

However, Simon teaches *a method according to claim 1, said step (b) of scoring*

*including the step of scoring a high value for an alphanumerical element and/or*

*graphical element that has an optimal relative position in the space, and the step of*

*scoring a low value for an alphanumerical element and/or graphical element that has*

*an poor relative position in the space, the rule or rules determining the optimal and*

*poor position in the space* (0061, lines 5-6; 210 in Fig 7; Simon teaches a system that

uses a "scoring" system when evaluating different page layouts. When evaluating a new layout with a prior layout, if the new layout has a greater score than the prior layout, the new layout is accepted. This optimization is iterated until the last iteration is obtained (0061, lines 10-14; 250 in Fig 7). The system can automatically iterate through the page layout subroutine generating a predefined number of image page layouts. The page layout that has the highest score is then chosen as the preferred page layout (0069, lines 8-11).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of selecting an optimal page layout to minimize cost (Simon 0060, lines 1-2), to obtain the invention as specified in the claim(s).


**In regards to dependent claim 8,** Fukui does not disclose expressly *a method according to claim 23, wherein the space is a page of a book.*

However, Simon teaches *a method according to claim 23, wherein the space is a page of a book* (0046; Simon teaches the term page is meant to include an album or scrapbook page, soft copy display, or other format where images are displayed.).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of displaying the different alphanumeric and/or graphical elements from the plurality of iterative layouts in a book format, to obtain the invention as specified in the claim(s).

**In regards to dependent claim 9,** Fukui discloses *a method according to claim 23, wherein the space is a frame to be displayed on a screen* (column 4, lines 40-43; 6 in Fig 1; Fukui discloses the layouts are to be displayed on a display unit.).

**In regards to independent claim 11,** Fukui discloses *a processing system for laying out elements in a defined space, the processing system comprising:* *(a) a store for storing* (column 7, lines 56-58; column 8, lines 49-53; 11 in Fig 1; Fig 19; Fukui discloses the results of the Layout Result Estimation Unit is evaluated by a Layout Status Evaluation Unit according to the prescribed evaluation rules, and stored in a table as being satisfactory or unsatisfactory.);

*(i)        content data including alphanumeric and/or graphical elements* (Fukui further discloses a Candidate Layout Generation Module for generating candidates/elements for a layout of the document data (column 3, lines 44-45; 7 in Fig 1). The document date includes text data representing sentences of the document and figure data representing drawings and tables of the document (alphanumeric and/or graphical elements) (column 3, lines 66-67).

*(ii)       score the resulting layout according to the rule or rules included in the design data* (column 7, lines 56-58; column 8, lines 49-53; 11 in Fig 1; Fig 19; Fukui discloses the results of the Layout Result Estimation Unit is evaluated by a Layout Status Evaluation Unit according to the prescribed evaluation rules, and stored in a table as being satisfactory or unsatisfactory.);

*(iii)      store said score* (column 7, lines 56-58; column 8, lines 49-53; 11 in Fig 1;

Fig 19; Fukui discloses the results of the Layout Result Estimation Unit is evaluated by

a Layout Status Evaluation Unit according to the prescribed evaluation rules, and

stored in a table as being satisfactory or unsatisfactory.);

Fukui et al. does not discloses expressly:

(ii)      *design data including a rule or rules associated with a particular*

*alphanumeric element or graphical element, said rule defining a scoring system which*

*defines a score dependent on a degree of   conformance to said rule, the element being*

*associated with priorities   representing a preferred ordering of the element;*

*(b) a processor adapted to:*

(i)      *arrange geometrically and according to the priorities the alphanumeric*

*and/or graphical elements included in the content data to generate a layout, the*

*arrangement being performed within the defined space in accordance with the preferred*

*ordering so as to obtain a resulting layout;*

(iii)      *repeat the above steps (b)(i) to (b)(iii) to determine a number of different*

*resulting layouts, thereby allowing one of the resulting layouts to be selected in*

*accordance with the score.*

However, Simon teaches:

(ii)      *design data including a rule or rules associated with a particular*

*alphanumeric element or graphical element, said rule defining a scoring system which*

*defines a score dependent on a degree of conformance to said rule, the element being*

*associated with priorities representing a preferred ordering of the element* (0061, lines

5-6; 210 in Fig 7; Simon teaches a system that uses a "scoring" system when

evaluating different page layouts. When evaluating a new layout with a prior layout, if

the new layout has a greater score than the prior layout, the new layout is accepted.

This optimization is iterated until the last iteration is obtained (0061, lines 10-14; 250 in

Fig 7). The system can automatically iterate through the page layout subroutine

generating a predefined number of image page layouts. The page layout that has the

highest score is then chosen as the preferred page layout (0069, lines 8-11). Simon

further teaches analyzing different page layouts according with a "predetermined

criteria" (0009). Using the broadest interpretation, the Examiner concludes that the

"predetermined criteria" could be composed of a rule or rules *defining a scoring system*

*which defines a score dependent on a degree of conformance to said rule, the element*

*being associated with priorities representing a preferred ordering of the element).*

*(b) a processor adapted to:*

 *(i) arrange geometrically and according to the priorities the alphanumeric*

*and/or graphical elements included in the content data to generate a layout, the*

*arrangement being performed within the defined space in accordance with the*

*preferred ordering so as to obtain a resulting layout* (0020; Simon teaches a method for

organizing a plurality of images in a predetermined page format. Using the broadest

interpretation of this meaning, the Examiner concludes that the "predetermined page

format" was developed based on specific priorities as how the elements are to be

arranged.).

*(iv)* *repeat the above steps (b)(i) to (b)(iii) to determine a number of different*

*resulting layouts, thereby allowing one of the resulting layouts to be selected in*

*accordance with the score* (section 0061, lines 5-6; lines 10-14; 250 in Fig 7; 210 in Fig

7; Simon teaches a system that uses a "*scoring*" system when evaluating different page

layouts. When evaluating a new layout with a prior layout, if the new layout has a

greater *score* than the prior layout, the new layout is accepted. This optimization is

iterated until the last iteration is obtained. At the time of the invention, using to Simons'

teaching it would have been obvious to a person of ordinary skill in the art that each

iteration would produce a different layout, thus determining a number of different

resulting layout.).

Therefore, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combine Simon with Fukui for the benefit of selecting an

optimal page layout to minimize cost (Simon et al., section 0060, lines 1-2), to obtain the

invention as specified in the claim(s).

**In regards to dependent claim 12,** Fukui discloses *the processing system*

*according to claim 11, the processing system including a display for presenting layouts*

*to the user* (column 4, lines 40-43; 6 in Fig 1; Fukui discloses the layouts are to be displayed on a display unit.).

**In regards to dependent claim 13,** Fukui discloses *the processing system according to claim 12, the processing system being adapted to:*

*(b)     generate output data representing the selected resulting layout* (column 4, lines 38-43; Fukui discloses a candidate layout generation unit for generating the candidate layouts.).

*(a)    select a resulting layout*

However, Simon teaches *select a resulting layout* (0061, lines 5-6; lines 10-14; 250 in Fig 7; 210 in Fig 7; Simon teaches a method that uses a "scoring" system when evaluating different page layouts. When evaluating a new layout with a prior layout, if the new layout has a greater score than the prior layout, the new layout is accepted. This optimization is iterated until the last iteration is obtained. The system can automatically iterate through the page layout subroutine generating a predefined number of image page layouts. The page layout that has the highest score is then chosen as the preferred page layout.).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Simon with Fukui for the benefit of selecting an optimal page layout to minimize cost (Simon 0060, lines 1-2), to obtain the invention as specified in the claim(s).

**In regards to dependent claim 14,** Fukui discloses *the processing system according to claim 13, the processing system being adapted to select the layout in accordance with at least one of:*

*(a)    Input commands received from a user* (column 4, lines 44-50; Fukui discloses the operator enters his choice of a desired layout through the operator selection input unit.).

*(b)    scores of the resulting layouts* (0061, lines 5-6; lines 10-14; 250 in Fig 7; 210 in Fig 7; Simon teaches a method that uses a "scoring" system when evaluating different page layouts. When evaluating a new layout with a prior layout, if the new layout has a greater score than the prior layout, the new layout is accepted. This optimization is iterated until the last iteration is obtained. The system can automatically iterate through the page layout subroutine generating a predefined number of image page layouts. The page layout that has the highest score is then chosen as the preferred page layout.).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Simon with Fukui for the benefit of selecting an optimal page layout to minimize cost (Simon 0060, lines 1-2), to obtain the invention as specified in the claim(s).

**In regards to dependent claim 15,** Fukui does not disclose expressly *the processing system according to claim 13 or claim 14, the processing system being coupled to a communications network, the processing system being adapted to:*

(a)    receive the content and/or designs data from one or more end stations

coupled to the communications network;  and,

 (b)    store the received content and/or designs data in the store.


        However, Simon teaches *the processing system according to claim 13 or claim*

*14, the processing system being coupled to a communications network, the processing*

*system being adapted to:*

(a)    *receive the content and/or designs data from one or more end stations*

*coupled to the communications network* (0047; Fig 1; Simon teaches a system, which

includes a personal computer *(one or more end stations)* that is coupled to a

communication network, containing a central processing unit that can execute a set of

predefined steps in carrying out the methods of the invention. The communication

network may be comprised of the Internet *(transfer the output data to a selected end*

*station)*, and network server, which can be accessed by an individual using an Internet

Service Provider (section 0047; Fig 1).


 *(b)    store the received content and/or designs data in the store* (0047; Fig 1; Simon

teaches a system, which includes a personal computer *(one or more end stations)* that

is coupled to a communication network, containing a central processing unit that can

execute a set of predefined steps in carrying out the methods of the invention. The

communication network may be comprised of the Internet, and network server *(store the*

*received content)*, which can be accessed by an individual using an Internet Service
Provider.).

Therefore, at the time of the invention, it would have been obvious to a person of
ordinary skill in the art to combine Simon with Fukui for the benefit of providing a
customer convenient and efficient access to the processes and functions of the current
invention.


**In regards to dependent claim 16,** Fukui does not disclose expressly *the
processing system according to claim 15, the processing system being adapted to
transfer the output data to a selected end station.*

However, Simon teaches *the processing system according to claim 15, the
processing system being adapted to transfer the output data to a selected end station*
(0047; Fig 1; Simon teaches a system, which includes a personal computer that is
coupled to a communication network, containing a central processing unit that can
execute a set of predefined steps in carrying out the methods of the invention. The
communication network may be comprised of the Internet *(transfer the output data to a
selected end station)*, and network server, which can be accessed by an individual
using an Internet Service Provider (0047; Fig 1).

Therefore, at the time of the invention, it would have been obvious to a person of
ordinary skill in the art to combine Simon with Fukui for the benefit of providing a
customer convenient and efficient access to the processes and functions of the current
invention.

**In regards to dependent claim 17,** Fukui discloses *the processing system*

*according to any one of the claims 11 to 16, the processing system being adapted to*

*determine the content and/or designs data in accordance with input commands*

*received from a user* (column 1, lines 53-63; Fukui discloses a document formatting

system. In one embodiment of the invention, the system comprises means for

inputting document data representing the document, including figure data (content

data), and region data indicating a layout region *(defined space)* to which the document

is to be laid out; means for generating and selecting candidate/element layouts for

each figure element; and means for formatting the document in the layout region

according to the selected candidate/element layouts *(design data))*.

**In regards to dependent claim 22,** Fukui discloses the system comprises

means for inputting document data representing the document, including figure data

(content data), and region data indicating a layout region (defined space) to which the

document is to be laid out; means for generating and selecting candidate/element

layouts for each figure element; and means for formatting the document in the layout

region according to the selected candidate/element layouts (design data) (column 1,

lines 53-63).

Fukui does not disclose expressly *a method according to claim 1, wherein*

*arranging geometrically the alphanumeric and/or graphical elements comprises at least*

*one of:*

positioning the alphanumeric and/or graphical elements within the defined space

resizing the alphanumeric and/or graphical elements.

However, Simon teaches positioning the alphanumeric and/or graphical elements

within the defined space (0048; Simon teaches the template comprises a plurality of

predefined locations for the placement of images.).

resizing the alphanumeric and/or graphical elements (0048; Simon teaches the

images can be proportionately size t fit in the template.).

Therefore, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combine Simon with Fukui for the benefit of providing a

customer convenient and efficient access to the processes and functions of the current

invention.


**In regards to independent claim 23,** Fukui discloses a method of laying out one

or more elements in a defined space, the method comprising, in a processing system,

the steps of:

(a)      arranging the one or more elements in the defined space according to a first set

of rules, the first set of rules relating to a desired arrangement of the one or more

elements in the defined space, the first set of rules also defining a predetermined

number of resulting layouts in accordance with a given number of elements (column 1,

lines 53-63; column 4, lines 21-23; 9 in Fig 1; Fukui discloses a document formatting

system. In one embodiment of the invention, the system comprises means for inputting

document data representing the document, including figure data (content data), and

region data indicating a layout region *(defined space)* to which the document is to be laid out; means for generating and selecting candidate/element layouts for each figure element; and means for formatting the document in the layout region according to the selected candidate/element layouts *(design data)*. Fukui discloses the Candidate Layout Generation Module consist of a Layout Position Candidate Generation Unit, which generates the candidates/elements positions for laying out the drawings and tables given by the figure data (arranging geometrically the alphanumeric and/or graphical elements included in the content data). The results of the Layout Result Estimation Unit is evaluated by a Layout Status Evaluation Unit according to the prescribed evaluation rules, and stored in a table as being satisfactory or unsatisfactory (column 7, lines 56-58; column 8, lines 49-53; 11 in Fig 1; Fig 19):).

Fukui does not disclose expressly *arranging the one or more elements in the defined space according to a first set of rules,*

*(b) for at least some of the resulting layouts, determining a score for the arrangement of the elements using a second set of rules, the second set of rules defining a scoring system for determining the score based on the arrangement of the one or more elements within the defined space; thereby allowing one of the resulting layouts to be selected in accordance with the score.*

However, Simon teaches *arranging the one or more elements in the defined space according to a first set of rules,*

*(b) for at least some of the resulting layouts, determining a score for the*

*arrangement of the elements using a second set of rules, the second set of rules*

*defining a scoring system for determining the score based on the arrangement of the*

*one or more elements within the defined space; thereby allowing one of the resulting*

*layouts to be selected in accordance with the score* (0048; 0061, lines 5-6; 210 in Fig 7;

Simon teaches the template comprises a plurality of predefined locations for the

placement of images. Simon further teaches a system that uses a *"scoring"* system

when evaluating different page layouts. When evaluating a new layout with a prior

layout, if the new layout has a greater *score* than the prior layout, the new layout is

accepted. Simon further teaches analyzing each different page layout in accordance

with a *"predetermined criteria"*, and selecting the page layout based on the

"predetermined criteria (009-0010). The Examiner uses the broadest reasonable

interpretation to conclude the *"predetermined criteria"* as taught by Simon could be a set

of prioritized rules *defining a scoring system for determining the score based on the*

*arrangement of the one or more elements within the defined space.*).

Therefore, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of

selecting an optimal page layout to minimize cost (Simon et al., section 0060, lines 1-2),

to obtain the invention as specified in the claim(s).


**In regards to dependent claims 24,** Fukui discloses a Candidate Order

Determination Unit, which determines the order of preference of the candidate/element

layouts according to the evaluation obtained by the Layout Status Evaluation Unit. The

preference is assigned according to rules for the Candidate Order Determination Unit

(column 4, lines 34-37; 13 in Fig 1; Fig 20).

Fukui does not disclose expressly *a method according to claim 23, wherein the*

*method includes selecting one of the resulting layouts based on the score.*

However, Simon teaches *a method according to claim 1, further including a step*

*(e) of selecting one of the resulting layouts in accordance with the score based on the*

*score* (section 0061, lines 5-6; lines 10-14; 250 in Fig 7; 210 in Fig 7; section 0069, lines

8-11; Simon teaches a system that uses a "*scoring*" system when evaluating different

page layouts. When evaluating a new layout with a prior layout, if the new layout has a

greater *score* than the prior layout, the new layout is accepted.  This optimization is

iterated until the last iteration is obtained. The system can automatically iterate through

the page layout subroutine generating a predefined number of image page layouts. The

page layout that has the highest score is then chosen as the preferred page layout.).

Therefore, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combine Simon et al. with Fukui et al. for the benefit of

selecting an optimal page layout to minimize cost (Simon et al., section 0060, lines 1-2),

to obtain the invention as specified in the claim(s).

**In regards to dependent claims 25,** Fukui does not disclose expressly *a*

*method according to claim 23, wherein arranging geometrically the elements comprises*

*at least one of:*

*positioning the elements within the defined space*

*resizing the elements.*

However, Simon teaches *positioning the elements within the defined space* (0048; Simon teaches the template comprises a plurality of *predefined* locations for the placement of images.).

*resizing the elements* (0048; Simon teaches the images can be proportionately size t fit in the template.).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Simon with Fukui for the benefit of providing a customer convenient and efficient access to the processes and functions of the current invention.

**In regards to independent claim 26,** the claim incorporates substantially similar subject matter as claim 23, and therefore, are rejected along the same rationale.

**In regards to dependent claim 27,** the claim incorporates substantially similar subject matter as claim 24, and therefore, are rejected along the same rationale.

**In regards to dependent claim 28,** the claim incorporates substantially similar subject matter as claim 25, and therefore, are rejected along the same rationale.

### Response to Arguments

10.    Applicant's arguments filed 11 May 2006 have been fully considered but they are

not persuasive.

Examiner withdraws rejection of Claim 5 under 35 U.S.C. 112.

Claim Rejection under 35 U.S.C. 103(a)

**With respect to independent claims 1 and 11**, applicant argues *both Simon et*

*al. and Fukui et al. fail to teach or suggest "arranging geometrically and according to the*

*priorities the alphanumeric and/or graphical elements to obtain a resulting layout".*

The Examiner disagrees.

Simon teaches a template which comprises a plurality of "predefined" locations

for the placement if images that are used to simplify the process if arranging images on

a page (0048). Simon further teaches analyzing each different page layout in

accordance with a *"predetermined criteria"*, and selecting the page layout based on the

"predetermined criteria (009-0010).

Fukui teaches a candidate order determination unit connected to the candidate

selection control unit for *"determining an order of preference"* among the candidate

layouts (col. 3, lines 62-65; col. 4, lines 34-37).

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art that Simon's teachings of a *"predetermined criteria"* and Fukui's teachings

of *"determining an order of preference"* both teaches the concept of prioritizing set criteria/rules for a particular task. The Examiner uses the broadest reasonable interpretation to conclude the *"predetermined criteria"* as taught by Simon could be a set of prioritized rules regarding *arranging ("determining an order of preference ") the alphanumeric and/or graphical elements to obtain a resulting layout.*

**With respect to independent claims 23 and 26**, applicant argues *both Simon et al. and Fukui et al. fail to teach or suggest "the first set of rules also defining a predetermined number of resulting layouts for a given number of element".*

The Examiner disagrees.

Simon teaches the system can automatically iterate through the page layout subroutine generating a *"predefined number of image page layouts"* (0069). The Examiner uses the broadest reasonable interpretation to conclude the *"predetermined criteria"* as taught by Simon could be a set of prioritized rules for *defining a predetermined number of resulting layouts for a given number of element.*

## *Conclusion*

11.    **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James J. Debrow whose telephone number is 571-272-

5768. The examiner can normally be reached on 8:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Heather Herndon can be reached on 571-272-4136. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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